

TITLE OF THE INVENTION

is a continuation of Application Serial No. 09/238,155 now abandoned which was
This application is based on U.S. provisional application Serial No. 60/073,573, filed
January 30, 1998. the priority of which is hereby claimed.

BACKGROUND OF THE INVENTION

Field of the Invention:

The present invention is directed to a method and apparatus corresponding to an insert
for an article of footwear with improved elastically deformable elements and arrangements
therefor which permit optimization of the biomechanics of a user's foot.

Discussion of the Background

Barrel shaped elastically deformable elements are taught in the U.S. Patent No.
5,092,060 issued to Frachey et al and U.S. Patent No. 5,396,896 issued to Frachey et al, the
subject matter of which is hereby expressly incorporated by reference into this application
and which is illustrated in Figures 179-182. Frachey et al '060 and '896 teach an article of
footwear comprising a vamp A at a lower support part 1 which comprises a sole 2 a wedge 3,
a mounting insole 5, and a further insole 6. Elastically deformable elements 14 of Frachey et
al '060 contained inside an insert 13, are arranged in seat 16 formed in wedge 3. The
deformable elements 14 are formed by molding a synthetic high elasticity material and are
substantially barrel shaped, with their major cross-sections being substantially in the central
region 20 in which said elements are joined together by an integral bridging portion 28.
Deformable elements 14 are arranged in an insert 13 made of thermoplastic material enclosed
in an airtight casing 15 which is constructed of plastic material such as polyurethane or
similar material. The air inside casing 15 has a pressure of less than or equal to atmospheric
pressure.

With reference to Figures 179-182 of the present application, the article of footwear of
Frachey et al '060 comprises a vamp A and a lower support part 1 comprising a sole 2, for